



CASE LA0086 NP

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Maureen P. O'Brien  
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Signature

January 13, 2004  
Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

MAGNIN ET AL.

APPLICATION NO: 10/690,173

FILED: OCTOBER 21, 2003

FOR: GLYCINENITRILE-BASED INHIBITORS OF DIPEPTIDYL  
PEPTIDASE IV AND METHODS

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INFORMATION DISCLOSURE STATEMENT

Sir:

This paper is being filed within three months of the filing date of the application. Therefore, no fees are required. If a fee is deemed to be required, the Commissioner is hereby authorized to charge such fee to Deposit Account No. 19-3880.

In accordance with 37 C.F.R. §1.56, applicants wish to call the Examiner's attention to the references cited on the attached form(s) PTO-1449.

Copies of these references are enclosed herewith.

The Examiner is requested to consider the foregoing information in relation to this application and indicate that each reference was considered by returning a copy of the initialed PTO 1449 form(s).

Respectfully submitted,

Bristol-Myers Squibb Company  
Patent Department  
P.O. Box 4000  
Princeton, NJ 08543-4000  
609-252-5286

Maureen P. O'Brien  
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Date: January 13, 2004

FORM PTO-1449  
(REV. 7-85)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

## INFORMATION DISCLOSURE CITATION

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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	AA	3,674,836	7/4/72	Creger			
	AB	3,983,140	9/28/76	Endo et al.			
	AC	4,027,009	5/31/77	Grier et al.			
	AD	4,231,938	11/4/80	Monaghan et al.			
	AE	4,346,227	8/24/82	Terahara et al.			
	AF	4,448,784	5/15/84	Glamkowski et al.			
	AG	4,450,171	5/22/84	Hoffman et al.			
	AH	4,499,289	2/12/85	Baran et al.			
	AI	4,613,610	9/23/86	Wareing			
	AJ	4,647,576	3/3/87	Hoefle et al.			
	AK	4,681,893	7/21/87	Roth			
	AL	4,686,237	8/11/87	Anderson			

## FOREIGN PATENT DOCUMENTS

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							YES	NO
	AM	0 142 146	5/22/85	EP			<input type="checkbox"/>	<input type="checkbox"/>
	AN	0 221 025	5/6/87	EP			<input type="checkbox"/>	<input type="checkbox"/>
	AO	2 596 393	10/2/87	FR			<input type="checkbox"/>	<input type="checkbox"/>
	AP	GB 2 205 837	12/21/88	UK			<input type="checkbox"/>	<input type="checkbox"/>
	AQ	WO 86/03488	6/19/86	PCT			<input type="checkbox"/>	<input type="checkbox"/>

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)

	AR	Ashworth, D.M. et al., "2-Cyanopyrrolidides as Potent, Stable Inhibitors of Dipeptidyl Peptidase IV", Bioorganic & Medicinal Chemistry Letters, Vol. 6, No. 10, pp. 1163-1166 (1996)
	AS	Ashworth, D.M. et al., "4-Cyanothiazolidides as Very Potent, Stable Inhibitors of Dipeptidyl Peptidase IV", Bioorganic & Medicinal Chemistry Letters, Vol. 6, No. 22, pp. 2745-2748 (1996)
	AT	Biller, S.A. et al., "Isoprenoid (Phosphinylmethyl)phosphonates as Inhibitors of Squalene Synthetase", Journal of Medicinal Chemistry, Vol. 31, No. 10, pp. 1869-1871 (1988)

EXAMINER

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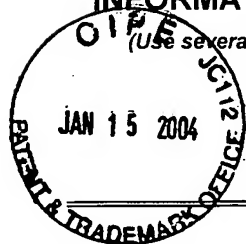
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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	2AA	4,759,923	7/26/88	Buntin et al.			
	2AB	4,871,721	10/3/89	Biller			
	2AC	4,924,024	5/8/90	Biller			
	2AD	5,006,530	4/9/91	Angerbauer et al.			
	2AE	5,011,930	4/30/91	Fujikawa et al.			
	2AF	5,177,080	1/5/93	Angerbauer et al.			
	2AG	5,260,440	11/9/93	Hirai et al.			
	2AH	5,273,995	12/28/93	Roth			
	2AI	5,346,701	9/13/94	Heiber et al.			
	2AJ	5,354,772	10/11/94	Kathawala			
	2AK	5,385,929	1/31/95	Bjorge et al.			
	2AL	5,488,064	1/30/96	Sher			

## FOREIGN PATENT DOCUMENTS

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	2AM	WO 86/07054	12/4/86	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	2AN	WO 96/38144	12/5/96	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	2AO	WO 97/12613	4/10/97	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	2AP	WO 97/12615	4/10/97	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	2AQ	WO 97/21993	6/19/97	PCT			<input type="checkbox"/>	<input type="checkbox"/>

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)

	2AR	Biller, S.A. et al., "Squalene Synthase Inhibitors", Current Pharmaceutical Design, Vol. 2, pp. 1-40 (1996)
	2AS	Bundgaard, H., Chapter 5: "Design and Application of Prodrugs", A Textbook of Drug Design and Development, Harwood Academic Publishers, publ., Krogsgaard-Larsen, P. and Bundgaard, T., eds., pp. 113-191 (1991)
	2AT	Bundgaard, H., ed., Design of Prodrugs, Elsevier Science Publishers B.V., publ. (1985) (table of contents)

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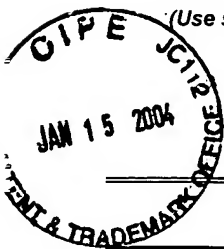
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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	3AA	5,491,134	2/13/96	Sher et al.			
	3AB	5,506,219	4/9/96	Robl			
	3AC	5,541,204	7/30/96	Sher et al.			
	3AD	5,594,016	1/14/97	Ueno et al.			
	3AE	5,595,872	1/21/97	Wetterau, II et al.			
	3AF	5,612,359	3/18/97	Murugesan			
	3AG	5,614,492	3/25/97	Habener			
	3AH	5,631,224	5/20/97	Efendic et al.			
	3AI	5,686,104	11/11/97	Mills et al.			
	3AJ	5,691,322	11/25/97	Robl			
	3AK	5,712,279	1/27/98	Biller et al.			
	3AL	5,712,396	1/27/98	Magnin et al.			

## FOREIGN PATENT DOCUMENTS

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	3AM	WO 99/00353	1/7/99	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	3AN	WO 99/38501	8/5/99	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	3AO	WO 99/46272	9/16/99	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	3AP	WO 99/61431	12/2/99	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	3AQ	WO 99/67278	12/29/99	PCT			<input type="checkbox"/>	<input type="checkbox"/>

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)

	3AR	Capson, T.L., "Synthesis and Evaluation of Ammonium Analogs of Carbocationic Intermediates in Squalene Biosynthesis", dissertation, Department of Medicinal Chemistry, University of Utah, pp. iv-v, Table of Contents, 16-17, 40-43, 48-51, Summary (June 1987)
	3AS	Corey, E.J. et al., "Application of Unreactive Analogs of Terpenoid Pyrophosphates to Studies of Multistep Biosynthesis. Demonstration That 'Presqualene Pyrophosphate' is an Essential Intermediate on the Path to Squalene", J. Am. Chem. Soc., Vol. 98, No. 5, pp. 1291-1293 (1976)
	3AT	Cornicelli, J.A. et al., "15-Lipoxygenase and Its Inhibition: A Novel Therapeutic Target for Vascular Disease", Current Pharmaceutical Design, Vol. 5, pp. 11-20 (1999)

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	4AA	5,739,135	4/14/98	Biller et al.			
	4AB	5,753,675	5/19/98	Wattanasin			
	4AC	5,760,246	6/2/98	Biller et al.			
	4AD	5,770,615	6/23/98	Cheng et al.			
	4AE	5,776,983	7/7/98	Washburn et al.			
	4AF	5,827,875	10/27/98	Dickson, Jr. et al.			
	4AG	5,885,983	3/23/99	Biller et al.			
	4AH	5,962,440	10/5/99	Sulsky			
	4AI	6,043,265	3/28/00	Murugesan et al.			
	AJ						
	AK						
	AL						

## FOREIGN PATENT DOCUMENTS

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	4AM	WO 99/67279	12/29/99	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	4AN	WO 00/01389	1/13/00	PCT			<input type="checkbox"/>	<input type="checkbox"/>
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	AP						<input type="checkbox"/>	<input type="checkbox"/>
	AQ						<input type="checkbox"/>	<input type="checkbox"/>

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	4AR	Ghiselli, G., "The Pharmacological Profile of FCE 27677: A Novel ACAT Inhibitor with Potent Hypolipidemic Activity Mediated by Selective Suppression of the Hepatic Secretion of ApoB-100-Containing Lipoprotein", Cardiovascular Drug Reviews, Vol. 16, No. 1, pp. 16-30 (1998)
	4AS	Hanessian, S. et al., "Probing the Importance of Spatial and Conformational Domains in Captopril Analogs for Angiotensin Converting Enzyme Activity", Bioorganic & Medicinal Chemistry Letters, Vol. 8, pp. 2123-2128 (1998)
	4AT	Hara, S., "Ileal Na <sup>+</sup> /bile acid cotransporter inhibitors", Drugs of the Future, Vol. 24, No. 4, pp. 425-430 (1999)

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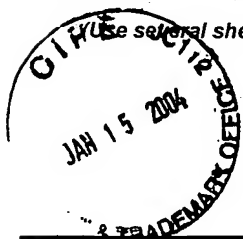
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5AA	Hughes, T.E. et al., "(1-[[[2-[(5-Cyanopyridin-2-yl)amino]ethyl]amino]acetyl]-2-cyano-(S)-pyrrolidine), a Slow-Binding Inhibitor of Dipeptidyl Peptidase IV", Biochemistry, Vol. 38, pp. 11597-11603 (1999)
5AB	Johannsson, G. et al., "Growth Hormone Treatment of Abdominally Obese Men Reduces Abdominal Fat Mass, Improves Glucose and Lipoprotein Metabolism, and Reduces Diastolic Blood Pressure", Journal of Clinical Endocrinology and Metabolism, Vol. 82, No. 3, pp. 727-734 (1997)
5AC	Krause, B.R. et al., Chapter 6: "ACAT Inhibitors: Physiologic Mechanisms for Hypolipidemic and Anti-Atherosclerotic Activities in Experimental Animals", Inflammation: Mediators Pathways, CRC Press, Inc., publ., Ruffolo, Jr., R.R. and Hollinger, M.A., eds., pp. 173-198 (1995)
5AD	McClard, R.W. et al., "Novel Phosphonylphosphinyl (P-C-P-C-) Analogues of Biochemically Interesting Diphosphates. Syntheses and Properties of P-C-P-C- Analogues of Isopentenyl Diphosphate and Dimethylallyl Diphosphate", J. Am. Chem. Soc., Vol. 109, pp. 5544-5545 (1987)
5AE	Murakami, K. et al., "A Novel Insulin Sensitizer Acts as a Coligand for Peroxisome Proliferator-Activated Receptor- $\alpha$ (PPAR- $\alpha$ ) and PPAR- $\gamma$ - Effect of PPAR- $\alpha$ Activation on Abnormal Lipid Metabolism in Liver of Zucker Fatty Rats", Diabetes, Vol. 47, pp. 1841-1847 (1998)
5AF	Nagatsu, T. et al., "New Chromogenic Substrates for X-Prolyl Dipeptidyl-Aminopeptidase", Analytical Biochemistry, Vol. 74, pp. 466-476 (1976)
5AG	Nicolosi, R.J. et al., "The ACAT Inhibitor, CI-1011 is effective in the prevention and regression of aortic fatty streak area in hamsters", Atherosclerosis, Vol. 137, pp. 77-85 (1998)
5AH	Ortiz de Montellano, P.R. et al., "Inhibition of Squalene Synthetase by Farnesyl Pyrophosphate Analogues", Journal of Medicinal Chemistry, Vol. 20, No. 2, pp. 243-249 (1977)
5AI	Rahfeld, J. et al., "Extended Investigation of the Substrate Specificity of Dipeptidyl Peptidase IV from Pig Kidney", Biol. Chem. Hoppe-Seyler, Vol. 372, pp. 313-318 (1991)
5AJ	Rosenblum, S.B. et al., "Discovery of 1-(4-Fluorophenyl)-(3R)-[3-(4-fluorophenyl)-(3S)-hydroxypropyl]-(4S)-(4-hydroxyphenyl)-2-azetidinone (SCH 58235): A Designed, Potent, Orally Active Inhibitor of Cholesterol Absorption", J. Med. Chem., Vol. 41, pp. 973-980 (1998)
5AK	Sagnard, I. et al., "Enantioselective Synthesis of Cyclopropane $\alpha$ -Amino Acids: Synthesis of N-Boc-cis-(2S,3R,4S)-3,4-Methanoproline and N-Boc-(2S,3R,4S)-3,4-Methanoglutamic Acid", Tetrahedron Letters, Vol. 36, No. 18, pp. 3149-3152 (1995)
5AL	Salisbury, B.G. et al., "Hypocholesterolemic activity of a novel inhibitor of cholesterol absorption, SCH 48461", Atherosclerosis, Vol. 115, pp. 45-63 (1995)
5AM	Sendobry, S.M. et al., "Attenuation of diet-induced atherosclerosis in rabbits with a highly selective 15-lipoxygenase inhibitor lacking significant antioxidant properties", British Journal of Pharmacology, Vol. 120, pp. 1199-1206 (1997)
5AN	Sliskovic, D.R. et al., "ACAT Inhibitors: Potential Anti-atherosclerotic Agents", Current Medicinal Chemistry, Vol. 1, pp. 204-225 (1994)

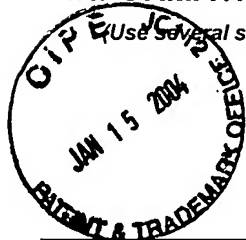
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6AA	Smith, C. et al., "RP 73163: A Bioavailable Alkylsulphonyl-Diphenylimidazole ACAT Inhibitor", Bioorganic & Medicinal Chemistry Letters", Vol. 6, No. 1, pp. 47-50 (1996)
6AB	Sorbera, L.A. et al., "Avasimibe: Treatment of Lipoprotein Disorders – ACAT Inhibitor", Drugs of Future, Vol. 24, No. 1, pp. 9-15 (1999)
6AC	Stout, D.M., "Inhibitors of Acyl-CoA:Cholesterol O-Acyl Transferase (ACAT) as Hypocholesterolemic Agents. 6. The First Water-Soluble ACAT Inhibitor with Lipid-Regulating Activity, etc.", Chemtracts-Organic Chemistry, Vol. 8, pp. 359-362 (1995)
6AD	Tverezovsky, V.V. et al., "Synthesis of (2S, 3R, 4S)-3,4-Methanoproline and Analogues by Cyclopropylidene Insertion", Tetrahedron, Vol. 53, No. 43, pp. 14773-14792 (1997)
6AE	Wermuth, C.G. et al., Chapter 31: "Designing Prodrugs and Bioprecursors I: Carrier Prodrugs", The Practice of Medicinal Chemistry, Academic Press, publ., Wermuth, C.G., ed., pp. 671-696 (1996)
6AF	Yamada, M. et al., "A Potent Dipeptide Inhibitor of Dipeptidyl Peptidase IV", Bioorganic & Medicinal Chemistry Letters, Vol. 8, pp. 1537-1540 (1998)
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